The role of the hospital in a changing environment

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Hospitals pose many challenges to those undertaking reform of health care systems. This paper examines the evolving role of the hospital within the health care system in industrialized countries and explores the evidence on which policy-makers might base their decisions. It begins by tracing the evolving concept of the hospital, concluding that hospitals must continue to evolve in response to factors such as changing health care needs and emerging technologies. The size and distribution of hospitals are matters for ongoing debate. This paper concludes that evidence in favour of concentrating hospital facilities, whether as a means of enhancing effectiveness or efficiency, is less robust than is often assumed. Noting that care provided in hospitals is often less than satisfactory, this paper summarizes the evidence underlying three reform strategies: (i) behavioural interventions such as quality assurance programmes; (ii) changing organizational culture; and (iii) the use of financial incentives. Isolated behavioural interventions have a limited impact, but are more effective when combined. Financial incentives are blunt instruments that must be monitored. Organizational culture, which has previously received relatively little attention, appears to be an important determinant of quality of care and is threatened by ill-considered policies intended to 're-engineer' hospital services. Overall, evidence on the effectiveness of policies relating to hospitals is limited and this paper indicates where such evidence can be found.

Keywords: hospitals; health facility environment; health care reform; organizational innovation; developed countries.

Voir page 808 le résumé en français. En la página 809 figura un resumen en español.

Introduction

Hospitals pose many challenges to those undertaking reform of health care systems. They are, quite literally, immovable structures whose design was set in concrete, usually many years previously. Their configuration often reflects the practice of health care and the patient populations of a bygone era. Their incompatibility with present needs ranges from major design problems, such as a scarcity of operating theatres, to more minor problems, such as the lack of power sockets for the ever expanding number of electronic monitors.

It is not only the physical structure that is difficult to change. Hospital functions are also resistant to change, as illustrated by the persistence of large tuberculosis sanitoria in some countries long after they were required. Hospitals are staffed by the élite members of the medical profession who, in many cases, can use their excellent political connections to oppose changes that threaten their interests. An environment that is technically complex, surrounded by much uncertainty, and which contains information asymmetry, only enhances the mystique of the medical professional and often leaves the outsider confused and perplexed.

Given these barriers to change, it is unsurprising that hospital reform is viewed with trepidation by health policy-makers. Yet hospitals are a very important element of the health care system. Financially, they account for about 50% of overall health care expenditure. Organizationally, they dominate the rest of the health care system. Symbolically, they are viewed by the public as the main manifestation of the health care system, as shown by the enthusiasm with which politicians seek to be photographed opening new hospitals.

This paper seeks to redress this information balance by examining the place of the hospital within the health care system in industrialized countries. It draws on a major study being undertaken by the European Observatory on Health Care Systems, which addresses a series of crucial but often overlooked questions. First, why were hospitals created and do these conditions still pertain? Has the dramatic growth in knowledge and technology invalidated the nineteenth-century foundations of hospitals? More fundamentally, what do we mean by the term 'hospital' and does the designation of a building as a 'hospital' mean the same thing everywhere?

Second, if hospitals are to be integral parts of the health care system, what should they look like? What size should they be? How should they be distributed within a geographical area? What should they look like on the inside? How can hospitals be designed in ways that enhance their performance,

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both in terms of health outcomes and economic performance?

Finally, hospitals are often considered as black boxes when, in reality, they are complex adaptive human systems. Why do some hospitals seem to work well whereas others do not? How can hospital performance be optimized? These questions will be considered in turn.

Why hospitals?

Hospitals, as recognizable institutions, emerged at different times in different places, reflecting existing social and, especially, religious contexts. The first recorded hospitals arose in the Byzantine Empire in the fifth and sixth centuries AD (*1*). Hospitals in western Europe emerged later, beginning in the monasteries (*2*), a legacy reflected in the religious designations of many present-day European hospitals. Most health care relied on extended families and local communities, however, since formal health services had little to offer.

The industrial revolution brought enormous social changes that impacted on health and health care. The rapid growth of cities provided opportunities for transmission of infections, unsafe factories increased injuries, death rates rose rapidly, and social supports crumbled with increasing population mobility. A combination of philanthropy and self-interest among the wealthy stimulated both public health measures and the construction of new hospitals. However, urban overcrowding and high levels of infection often meant that going into these hospitals actually increased the chance of one dying.

By the end of the nineteenth century infectious disease was beginning to be understood. Semmelweis showed that hand-washing could reduce the transmission of puerperal fever. Lister's introduction of antisepsis, coupled with the discovery of safe anaesthetic agents, made elective surgery safer. In England, Florence Nightingale established a professional basis for nursing. Hospitals were now able to offer more than basic care, but their role as a setting for medical treatment was not yet established, and the middle classes continued to have the doctor treat them at home. By the twentieth century, the hospital was beginning to take on its present-day role. Advances in chemical engineering laid the basis for a pharmaceutical industry; for example, research on chemical dyes led to the invention of sulfonamides. Hospitals began to offer cure rather than care. As the scope for clinical intervention increased, technology became more complex and expensive. By the 1930s, few surgeons operated on wealthy patients in their own houses.

Advances in military surgery in the Second World War had a profound impact on hospital care, with the introduction of safe blood transfusion, penicillin, and surgeons trained in trauma techniques. The greatest changes occurred from the 1970s onwards, however, with advances in laboratory diagnosis and the recognition of new, and often treatable, diseases. The massive expansion in pharmaceuticals transformed the management of diseases and conditions such as peptic ulcer, childhood leukaemia and some solid cancers. New specialities emerged, such as oncology, and common conditions such as peptic ulcer, previously treated with prolonged hospitalization, were managed in ambulatory care. Whole new areas of surgery became commonplace, such as coronary artery bypasses, transplantation of kidneys and other organs, and microsurgery.

These advances took place against a background of changing patterns of disease. At least in industrialized countries, many infectious diseases were disappearing. General surgeons saw fewer cases of acute appendicitis. Orthopaedic surgeons turned to hip replacements, as a substitute for surgery on tuberculous disease of the spine, or tendon transplants for poliomyelitis. Thoracic surgeons, no longer occupied by tuberculous lung cavities, turned to the surgical management of lung cancer and to open heart surgery.

By the beginning of the twenty-first century, the work of a major hospital in an industrialized country has been transformed from that of a century earlier. The image beamed into homes throughout the world, in television programmes such as the North American series "ER", is that a 'hospital' means a modern complex in which seriously ill patients are treated at high speed with highly technical equipment and by skilled specialist staff. A patient with a head injury is given an immediate magnetic resonance imaging scan and is seen by a neurosurgeon who has subspecialized in intracerebral trauma.

By contrast, a small rural hospital in a middle-income country, providing basic care with limited facilities, could not be more different. For this image we can turn to the travel writer, Colin Thubron, who describes a small hospital in Siberia thus: "Inside the building was a simple range of three-bed wards, a kitchen and a consulting room. It had no running water, and its lavatory was a hole in the ground. Between the double windows the sealing moss had fallen in faded tresses. It was almost without equipment." (*3*)

While these two images represent the extremes of the spectrum, there is considerable diversity even within relatively homogenous health care systems. Some hospitals provide high intensity care with specialized back-up from a range of surgical specialities, while others concentrate on less acute care or even convalescence and rehabilitation.

Competing roles?

From this brief review it can be seen that the survival of the hospital as an institution reflects two quite different needs. The first derives from the rapid growth of advanced technology and clinical specialization. The resources involved, including humans

and equipment, are scarce and expensive. It is simply not tenable to disperse such resources across a large number of small facilities. This situation is analogous to the growth of the factory in the eighteenth century, driven by the spread of the steam engine, that made the earlier cottage industries obsolete.

The second need, to provide care rather than cure, is quite different. Care requires people rather than equipment, and generalists rather than specialists. Centralization of services is not necessary on cost grounds, especially since access may be more important for patients and families.

In this complex environment it is essential that policy-makers know which aspects of hospital design and configuration are supported by evidence and which are not. This paper seeks to offer an introduction to some of the research upon which they can draw.

What should a hospital look like?

The configuration of hospital services in a given setting reflects a tension between two competing objectives: centralization versus dispersion of hospital services. There are two arguments for centralizing hospital services. First, hospitals and clinicians undertaking high volumes of work achieve better outcomes; and second, large hospitals achieve economies of scale. The counter argument for dispersing hospitals is that this improves population access and reduces inequalities. These arguments are discussed in more detail below.

The major source of evidence on these issues is a systematic review of over 200 studies undertaken in 1996 by the Centre for Reviews and Dissemination at the University of York (*4*). Although this review was extensive, it is important to remember that much of this research emanates from the USA and the United Kingdom, so that it is open to question as to whether the data are generally applicable.

Greater volume leads to better health outcomes

The authors of the University of York study concluded that the widely held view, that greater volume led to better outcomes, was subject to several caveats. First, most authors overestimated the size of the relationship because it failed to take sufficient account of case mix. Second, if a causal association does exist, the direction of causation cannot be established. In other words, does "practice make perfect" or are better results in larger hospitals due to selective referral? Third, improvements in quality of care could be achieved through greater specialization within hospitals, rather than by increasing the size of the hospital.

The authors also criticized the use of mortality as a measure of outcome, especially since in-patient deaths or 30-day mortality rates are not good indicators of long-term survival. Differences in short-term survival may also reflect different discharge policies or different levels of social support. More fundamentally, mortality as a measure of outcome, although relatively easily measured, is a partial measure of quality of care, since it ignores non-fatal complications and quality of life. There is also a risk that a narrow focus on outcomes may obscure important differences in the process of care (*5*). There are many other unresolved issues. For example, research has tended to concentrate on hospital rather than physician volume. If an association between volume and outcome is demonstrable at the level of the physician, could the benefits of higher volumes be achieved by guidelines and clinical protocols that diffuse good practice?

Nonetheless, certain findings do emerge. The volume of procedures at which optimal results are achieved is often relatively low. In the case of coronary artery bypass grafting, there is no significant improvement in outcome in hospitals undertaking over 200 procedures per year. In most countries, few hospitals undertake such a low volume of cases. Studies that have examined both hospital and physician volume have found a relationship between outcome and hospital volume, but not between outcome and physician volume (*6–9*), suggesting that the collective expertise of the entire surgical team is more important than that of the individual surgeon. This finding is plausible given that surgical patients are more likely to die from post-operative complications than from problems occurring in the operating theatre.

Large hospitals achieve economies of scale

The second argument for concentrating hospitals is on grounds of efficiency, with larger hospitals purportedly achieving economies of scale. This has been examined in detail by Aletras et al. (*10*), who concluded that economies of scale, assuming the hospital is already operating at maximum efficiency, are exploited at quite low levels of around 200 beds, and diseconomies of scale become important at levels over 650 beds. The data were insufficient to specify an optimal size but suggested it was in the range of 200–400 beds.

Economies of scope should also be considered. The hospital contains a complex set of interrelated functions and one factor driving the growth of modern general hospitals was to gather different specialities together under one roof. There may be strong arguments for creating larger hospital units to facilitate links between related specialities, to strengthen multidisciplinary teams, to ensure optimal use of expensive equipment such as scanners or operating theatres, or to support the training role of the hospital. Here, each case must be considered on its merits.

Although existing research on hospital configurations has limitations, it provides little support for concentrating care in very large hospitals, either on grounds of effectiveness or efficiency, but some concentration may be required to achieve economies

of scope, which should then be made explicit. Importantly, where the current pattern of provision is dispersed, there is little evidence to support mergers of existing facilities. Ferguson & Goddard (*11*) concluded that there was no conclusive evidence that hospital mergers undertaken to concentrate facilities reduced total costs. First, management costs may be reduced only in the short run; and second, important diseconomies may emerge due to the difficulty of integrating staff and systems. Only where there is clearly identified excess capacity that can be removed will concentration or merger be expected to reduce overall costs. Such a policy should, however, take account of other potential costs to the communities in which hospitals are situated, as the impact on total employment may be considerably greater than the number of jobs lost directly from reorganizing the hospital (*12*).

An important argument against concentration of hospitals is that such a policy will reduce access to care. This may be especially important if, as has been suggested in New Zealand, differential access to health care contributes to socioeconomic inequalities in health (*13*). Such problems are likely to be greatest in rural areas, as illustrated by a study from France. Patients with colorectal cancer living in rural areas experienced greater delay in obtaining treatment, were less likely to be treated in specialist centres, and also had worse outcomes than those in urban areas (*14*). The relationship between distance and access, often characterized as a distance–decay effect, has been reported for preventive, primary and secondary care (*15, 16*). For example, in a study of factors influencing uptake of breast cancer screening, distance was the single most important factor (*17*). In a study from Northern Ireland, use of emergency services was much greater among those living closer to a hospital (*18*). Furthermore, patients already attending hospital may be less likely to remain in a treatment programme if they must travel long distances (*19*).

In contrast, several studies have found no effect of distance on utilization of care (*20, 21*). The apparently conflicting evidence has been examined in detail by Carr-Hill et al. (*22*), who noted that the research is subject to several limitations. One is the need for caution when extrapolating from a country such as the United Kingdom, where the distances involved are generally short, to a country like Canada where distances may be vastly greater. Another is the absence, in many studies, of an examination of any differential impact of distance upon different social classes or ethnic groups. The absence of an overall effect, therefore, may obscure important inequalities within particular population groups.

In summary, access is generally more important in relation to primary care, outpatient services, and screening programmes, with inpatient care being relatively less affected. These findings have important implications for hospital planning, since they show that hospital size is only one consideration. For example, the overall mix of functions required to meet the needs of the population served must be decided; and it must then be decided how each function can best establish a critical mass for providing good quality care. It must be recognized that in many places this has not yet been achieved, with multiple small units isolated from other specialities and with duplication of costly equipment. In such cases, major restructuring will be required. Once an integrated, effective and efficient system has been established there is no strong case for concentration into ever larger units, in pursuit of economies of scale or better outcomes.

Unpacking the black box

Hospitals have been subjected to systematic efforts to change organizational behaviour over the last few decades. Three main approaches have been used to improve performance: (i) providing incentives for optimizing clinical performance; (ii) changing the organizational environment; and (iii) changing payment mechanisms.

Incentives for optimizing clinical performance

In many countries there is growing evidence that clinical performance in hospitals is sub-optimal. The strategies used to address this problem include quality assurance models, clinical audit and the new concept of clinical governance, in which quality is a shared managerial and clinical responsibility. These are based on the assumption that quality assurance activities and continuing professional development lead to improved quality of care.

Unfortunately, the available evidence, mostly drawn together within the framework of the Cochrane Collaboration, demonstrates that clinical behaviour is quite resistant to change. For example, a review of 99 trials concluded that there was little or no change following conferences or short educational events (*22*). Freemantle similarly found no benefit from distribution of educational materials (*23*). Educational outreach visits do, however, make a small impact on behaviour (*24*) and the classical audit and feedback model works in some circumstances (*25*). Perhaps the most important finding to emerge is that behavioural change is most likely to follow a range of interventions that are mutually reinforcing (*26*).

Changing the organizational environment

A second approach to improving the quality of care has emerged from research on the relationship between organizational culture and quality of care (*27*). Certain hospitals ("magnet" hospitals) were identified that were widely regarded by nurses as offering a good environment in which to practise nursing (but where patient outcomes were unknown). These hospitals were characterized by greater nursing autonomy and better relationships between doctors and nurses. These hospitals were

matched with controls and, after adjustment for severity, the "magnet" hospitals achieved a significantly lower inpatient mortality rate.

Other work reached similar conclusions, finding tangible benefits to patients from a supportive culture among clinical staff (*28*). For example, organizational and professional job satisfaction among nurses is a strong predictor of process measures of quality of care (*29*). In intensive care units, the best predictors of better patient outcomes are organizational factors such as a patient-centred culture, strong medical and nursing leadership, effective collaboration, and an open approach to problem solving (*30*).

This research has several important implications. First, it helps us understand why some hospitals perform better than others. Second, it highlights the fact that hospitals are complex human service organizations, and not just assemblies of industrial units to be reconfigured at will. Major organizational change can have profound implications for a hospital workforce and, while a hospital must adapt to a changing environment, radical restructuring may adversely affect the quality of patient care if it damages staff morale and a collegial ethos.

Changing payment mechanisms

The third main approach to quality of care is the use of financial incentives. Payment mechanisms have received considerable attention, but can only be mentioned briefly here. The ideal mechanism would be one that offered incentives for producing effective, efficient and equitable treatment, with no perverse incentives and with minimal transaction costs. In practice, many of the systems fail on one or more of these counts (*31*). A perfect system is not of course achievable, since there are inevitable trade-offs. Financial incentives, while good at pushing behaviour in a certain direction, are less good at putting limits upon financial motivation. In each case it is important to identify, on the basis of empirical evidence, the positive and negative effects of each model of payment and then to monitor the effects in practice.

Looking ahead

The health policy-maker is often faced with inherited hospitals that are the wrong size and shape and in the wrong place. The evidence reviewed above helps in deciding what a hospital should look like now, but hospitals cannot be built or converted instantly. A decision to build a major hospital now means, in optimal circumstances, that it will open in five years' time, with an expected operating life of around 50 years. The key challenge is thus to know what the hospital of the future should look like. Will we still need the hospital or can its functions be performed elsewhere? Prediction, an imprecise art at the best of times, is especially risky in this situation. As discussed earlier, the environment in which hospitals exist has continually changed and the pace of change is accelerating. The situation is complicated further in that different countries start from very different baselines and face different challenges, both in the demands placed upon them and the resources available to them.

It is, however, possible to speculate about some factors. A key issue will be the continually changing burden of disease, although the effects are difficult to quantify. First, the nature of the change will be different in every country, reflecting differences in, for example, diet, smoking rates and exposure to risk of injury or infections. Second, it is possible that some previously unknown disease will emerge, as human immunodeficiency virus (HIV)/acquired immunodeficiency syndrome (AIDS) emerged in the twentieth century. Changes in patterns of existing diseases are more amenable to prediction, at least in the short term. In many industrialized countries, for example, rates of some chronic diseases will continue to fall. However, this will be accompanied by increases in degenerative disorders such as Alzheimer disease, increasing the need for care rather than cure. Rapid increases in smoking-related diseases can be predicted, as well as a continuing growth in AIDS.

The possible consequences of newly emerging diseases are much more problematic, with important consequences for clinical practice and hospital design. An example has been the need to adopt universal precautions to prevent transmission of HIV. In the future, the growth of antibiotic resistance may lead to further changes as diseases that are generally amenable to treatment, such as tuberculosis, become not only effectively incurable but also easily transmissible to staff and other patients. A particular concern in some European countries is the possibility that human forms of bovine spongiform encephalopathy (so-called mad cow disease) could become widespread as the prion agent involved is extremely resistant to sterilization (*32*). These drug-resistant and highly infectious diseases could fundamentally challenge the concept of the hospital, rendering them as dangerous as they were in the pre-antibiotic days.

A second set of issues relates to changes in the people who work in hospitals. Some changes will reflect demographic trends and macroeconomic trends, in particular affecting the size of the nursing workforce. Others will reflect changing expectations, such as the willingness to work long and unsocial hours. Here, the need to provide 24-hour medical cover while not degrading skills is, in some countries, acting as a powerful force for concentrating facilities (*33*).

A third set of issues arises from developments in technology, with new possibilities for investigation or treatment. Examples include the continuing advances in imaging, fibre-optics and information technology. These advances will lead to changes in professional demarcations as particular tasks cease to

be seen as the reserve of a single group. These changes will affect not only the internal organization of the hospital, but also its interface with the outside world, as complex diagnosis and treatment, and thus patients, move into clinics for day surgery and into the primary care sector.

Technology will also bring profound changes in what it is possible to do within the hospital. Early computers occupied entire buildings, yet their processing power was less than a present-day hand-held organizer. The growth in information technology has left few areas of health care untouched, ranging from rapid processing of digital images to an enhanced capacity to monitor and more actively manage patient care. Miniaturization has allowed user-friendly diagnostic kits to replace what would previously have required a complex laboratory. As has already happened with AIDS in many countries, and with peptic ulcers previously, new drugs will reduce demand for inpatient treatment.

What are the implications of these likely changes for the hospital of the future? If a narrow technological perspective is taken, it is possible to argue that the hospital as a concept will no longer be justified. Advances in technology may mean that the hospital is not needed as a means of concentrating expensive equipment. Developments in communications technology and, in particular, telemedicine may mean that the hospital is not needed to concentrate skilled staff. In such circumstances it is conceivable that a virtual hospital could be constructed, in which patients would be diagnosed and treated in local ambulatory care centres, drawing on specialist expertise located remotely where necessary. Conversely, it is arguable that this model ignores other roles of the hospital, in particular its caring role, as well as its role in training and professional development.

The hospital of the future must respond to all of these challenges. It must balance economies of scope with optimal access, drawing on advances in technology as appropriate. It may need fewer beds, but it will need more operating theatres and recovery areas, as well as purpose-built facilities that can offer one-day surgery, or integrated care for common disorders (*34*). Most importantly, the hospital will need to be flexible, because the diseases it treats and the ways in which it treats them will be very different from those of today. ■

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Résumé

Le rôle de l'hôpital dans un environnement en mutation

Les hôpitaux posent de nombreux problèmes à ceux qui entreprennent de réformer les systèmes de soins de santé. Cet article examine l'évolution de la fonction de l'hôpital dans le système des soins de santé des pays industrialisés et analyse les éléments sur lesquels les décideurs pourraient baser leurs décisions. Il commence par retracer l'évolution historique de l'hôpital qui, de lieu dans lequel les gens malades pouvaient se faire soigner, est devenu un établissement hautement technique de diagnostic et de traitement. Il analyse la façon dont les hôpitaux ont continuellement évolué en réponse à des facteurs externes, dont les plus importants ont été l'émergence et le déclin de différentes maladies et des techniques dont on disposait pour y faire face. Toutefois, l'hôpital n'est pas seulement une structure dans laquelle appliquer des techniques de plus en plus sophistiquées en réponse à la maladie. C'est également un établissement de soins et de formation, et il appartient aux décideurs de trouver les moyens pour qu'il assume ces différents rôles qui entrent parfois en compétition.

L'article se poursuit par un examen des arguments avancés concernant la configuration optimale des hôpitaux. La taille et la répartition des hôpitaux sont des questions qui font l'objet d'un débat permanent. Si, dans beaucoup de pays, la tendance a été de fermer les petits hôpitaux et de concentrer les installations sur certains sites, les arguments cités en faveur de cette politique sont moins solides qu'on ne le pense souvent, que ce soit pour renforcer l'efficacité ou la rentabilité. Toutefois, les fermetures et les fusions peuvent être justifiées lorsqu'elles sont destinées à réduire un excès de moyens ou à réaliser des économies de gamme (c'est-à-dire lorsqu'on peut gagner en efficacité en rassemblant différentes fonctions en un seul endroit).

Prenant acte de ce que les soins fournis dans les hôpitaux sont souvent moins que satisfaisants, les auteurs récapitulent les éléments sous-jacents à trois stratégies de réforme : interventions de type comportemental, par exemple programmes d'assurance de la qualité ; changement de la culture organisationnelle ; et recours à des mesures d'incitation financière. Les interventions comportementales, si elles sont isolées, ont un impact limité, mais elles sont plus efficaces lorsqu'elles sont associées à un ensemble de mesures cohérentes. Les mesures d'incitation financière sont des instruments dangereux qu'il faut surveiller à cause du risque d'effets pervers. La culture organisationnelle, qui n'a que peu retenu l'attention jusqu'ici, semble être un

déterminant important de la qualité des soins, mais elle est menacée par les politiques mal inspirées visant à « réorganiser » les services hospitaliers.

Concernant l'avenir, les hôpitaux sont continuellement confrontés à des changements, tant sur le plan des maladies qu'ils traitent que sur celui du personnel qu'ils emploient ou des techniques dont ils disposent. Ces changements auront des conséquences nombreuses et variées, souvent contradictoires, dont certaines sont prévisibles mais dont beaucoup ne le sont pas. Concernant les maladies, le changement porte sur l'évolution des tendances existantes, mais aussi sur l'émergence possible de nouvelles infections hautement contagieuses. Les modifications opérées dans la dotation en personnel des hôpitaux sont les conséquences de l'évolution économique et démographique, d'attentes différentes et de l'apparition de fonctions et groupements professionnels nouveaux. Sur le plan technique, les changements s'opèrent en fonction des nouvelles possibilités de traiter les patients en ambulatoire, mais aussi de celles que l'on aura de traiter à l'hôpital des malades actuellement incurables. En ne mettant l'accent que sur les progrès technologiques, on risque de considérer que l'hôpital va devenir une notion dépassée, les progrès scientifiques rendant inutile le fait que l'hôpital rassemble du matériel coûteux et la télémédecine rendant inutile l'obligation d'avoir un personnel qualifié en un endroit donné. Toutefois, un tel modèle ignore les autres fonctions de l'hôpital, en particulier les soins qu'on y prodigue, et son rôle dans la formation et dans la formation professionnelle continue. Le message peut-être le plus important pour l'avenir est de bien souligner l'importance de concevoir les hôpitaux comme devant être souples et devant conserver une certaine capacité d'adaptation au changement.

Resumen

Papel del hospital en un entorno en transformación

Los hospitales plantean muchos desafíos para quienes emprenden reformas de los sistemas de atención de salud. En este artículo se describe la evolución del papel desempeñado por los hospitales en el sistema asistencial de los países industrializados y se examinan las pruebas científicas sobre las que los formuladores de políticas podrían basar sus decisiones. Al principio se analiza la transformación que han sufrido los hospitales, que de ser un lugar donde se atendía a los enfermos han pasado a ser un entorno altamente técnico de diagnóstico y tratamiento. Se muestra cómo los hospitales han evolucionado continuamente en respuesta a factores externos, los más importantes de los cuales son el aumento o disminución de distintas enfermedades y las oportunidades técnicas disponibles para responder a ellas. Sin embargo, el hospital no es sólo una estructura en la que pueden emplearse tecnologías cada vez más sofisticadas contra las enfermedades, es también un entorno de prestación de cuidados y de capacitación, e incumbe a los formuladores de políticas hallar la manera de combinar esas funciones a veces reñidas.

A continuación se analizan los argumentos esgrimidos respecto a la configuración óptima de los hospitales. Se sigue discutiendo cuál debe ser su tamaño y distribución. Aunque en muchos países ha habido iniciativas para cerrar los hospitales más pequeños y centrar los servicios en un solo sitio, los datos citados a favor de esta política, en lo que atañe a mejorar tanto la eficacia como la eficiencia, son menos sólidos de lo que a menudo se supone. No obstante, los cierres y fusiones pueden estar justificados cuando se trata de reducir un exceso de capacidad o de lograr economías de alcance (esto es, cuando se puede conseguir una mayor eficiencia concentrando diferentes funciones en un solo lugar).

Tras señalar que la atención proporcionada en los hospitales dista con frecuencia de ser satisfactoria, el artículo resume las pruebas científicas que fundamentan tres estrategias de reforma; a saber, las intervenciones comportamentales, como los programas de garantía de la calidad; la transformación del clima institucional; y el uso de incentivos financieros. Las intervenciones comportamentales aisladas tienen una repercusión limitada, pero son más eficaces cuando se combinan en un paquete coherente de medidas. Los incentivos financieros son instrumentos burdos que deben ser objeto de vigilancia pues pueden tener efectos perversos. El clima institucional, relativamente ignorado hasta ahora, parece ser un importante determinante de la calidad de la asistencia, pero se ve amenazado por políticas poco meditadas encaminadas a reestructurar radicalmente los servicios hospitalarios.

Mirando hacia el futuro, los hospitales han de hacer frente a la continua transformación de las enfermedades que tratan, del personal que trabaja en ellos y de la tecnología a su disposición. Todos esos factores tendrán muchas implicaciones diferentes, y a menudo incompatibles, predecibles algunas, pero no así muchas otras. Los cambios que experimenten las enfermedades serán en parte el resultado de tendencias actuales, pero hay que prever también la posible emergencia de nuevas infecciones altamente contagiosas. Los cambios que afectarán al personal hospitalario se deberán a factores económicos y demográficos, a las diferentes expectativas creadas y a la aparición de nuevas funciones y asociaciones profesionales y laborales. Entre los cambios tecnológicos figurará la posibilidad de tratar a los pacientes fuera del hospital, pero también la de tratar en el hospital casos actualmente intratables. Una perspectiva basada exclusivamente en los avances tecnológicos podría llevar a pensar que el concepto de hospital perderá vigencia, pues los avances científicos evitarán la necesidad de concentrar equipo oneroso en hospitales, y la telemedicina hará innecesaria la concentración del personal especializado en un solo lugar. Sin embargo, ese enfoque ignora las otras funciones del hospital, en particular su papel asistencial,

así como su contribución a la capacitación y al desarrollo profesional permanente. El mensaje más importante para el futuro es tal vez la necesidad de asegurar que los hospitales se diseñen de manera que sean flexibles y conserven la capacidad de adaptarse a las transformaciones del entorno.

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